UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,368	10/31/2003	Marcel-Catalin Rosu	YOR920030508US1	3047

7590 07/25/2007	EXAMINER
Moser, Patterson & Sheridan Suite 100 595 Shrewsbury Avenue Shrewsbury, NJ 07702	DUNN, DARRIN D

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after t he mailing date of this communication, even if timely filed, may re duce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All   b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date *10/31/2003*.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is responsive to the communication filed on 10/31/2003.

2.   Claims 1- 38 have been presented for examination.

Drawings

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they

include the following reference character(s) not mentioned in the description: [FIG 1 –

R0....RN] are not referenced in the specification. Corrected drawing sheets in compliance with

37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the

description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should include

all of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Claim Objections

4.   Claim 17 is objected to because of the following informalities: Replace the period

following tree with a semi-colon. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Boivie et al.

(USPN 6625773).

7.   As per claims 1 and 23, Boivie et al. teachers a method for distributing content to a

plurality of receivers, wherein said content is packetized into one or more packets, comprising:

         establishing a multicast distribution tree rooted –multicast tree ([FIG 1], [COL 3 lines 26-

27]) at a sender –source node A ([COL 3 line 33]); and

         directing the transmission of one or more packets ([COL 4 lines 4-16] e.g., packets

addressed to list of destinations) along at least a portion   ([FIG 1], [COL 4 line 9] e.g.,

respective paths of tree) of the multicast distribution tree.

         wherein the at least a portion of the multicast distribution tree along which the one or more

packets travel is varied on a packet-by-packet basis –modified list of destinations ([COL 4 lines

26-29], [COL 5 lines 8-12])

8.   As per claims 2, 11, 24, and 33, Boivie et al. teaches the method of claim 1, wherein the

step of directing the transmission further comprises:

         encoding each of the one or more packets with at least a portion of said multicast

distribution tree ([COL 4 lines 8-14]), wherein the multicast distribution tree identifies the

receiver – R1 ([COL 4 line 9]) to which each packet is to be delivered and the path along which

each packet is to travel to the receiver – address of R1 ([COL 4 line 9])

9.   As per claims 3 and 25, Boivie et al. teaches the method of claim 2, wherein the multicast

distribution tree is sender-defined ([COL 3 lines 33-37])

10.   As per claims 4,12, 26, and 34, Boivie et al. teaches the method of claim 1, wherein the

step of directing the transmission comprises:

    sending one of said one or more packets to a first group of receivers –R1, R2, R3 ([COL 4

lines 36-40]) ;

    creating at least one copy of the packet by at least one of said first group of

receivers – replicating packets ([COL 4 lines 24-25]); and

    forwarding at least one copy of the packet to at least one receiver in a subsequent level – R3-

R4 or R3- R5 ([FIG 1], [COL 4 lines 41-46]) within said multicast distribution tree.

11.   As per claim 5, 13, 21, 27, and 35, Boivie et al. teaches the method of claim 1, wherein

each receiver that is not

    a final destination for said one or more packets copies and forwards said one or more received

packets to a subsequent receiver in accordance with said at least a portion of the multicast

distribution tree ([COL 4 lines 36-54])

12.   As per claims 6,14, 22, 28, and 36 Boivie et al. teaches the method of claim 2, further

comprising:

    encoding at least some of the one or more packets with forward error correction

coding -checksum ([COL 6 lines 60-68], [COL 7 lines 1-26]).

13.   As per claims 7, 15, 29, and 37, Boivie et al. teaches the method of claim 4, wherein

transmissions from sender-to-receiver – source uni-casting ([COL 5 lines 47-48]) and receiver-

to-receiver –uni-casting for last hop ([COL 4 lines 55-56]) are individually accomplished using

unicast distribution communication.

14.   As per claims 8, 16,30, 31, and 38 Boivie et al. teaches the method of claim 1, wherein the

step of establishing a multicast distribution tree comprises:

adjusting a structure of the multicast distribution tree to address a given metric, wherein said

metric is at least one of cost, delay, bandwidth, latency or reliability ([COL 4 lines 61-67], [COL

5 lines 1-7] e.g., bandwidth is conserved via sending packets to a given next hop by eliminating

unnecessary packets).

15.   As per claims 9 and 32, Boivie et al. teaches a method for distributing content to a

plurality of receiver, wherein said content is packetized into at least one packet, comprising:

establishing a multicast distribution tree rooted –multicast tree ([FIG 1], [COL 3 lines 26-

27]) at a sender –source node A ([COL 3 line 33]); and

directing the transmission of one or more packets ([COL 4 lines 6-16] e.g., packets

addressed to list of destinations) along at least a portion   ([FIG 1], [COL 4 line 9] e.g.,

respective paths of tree) of the multicast distribution tree.

wherein the receivers to which the at least one packet is sent, and the paths along which the

at least one packet is sent to the receivers, are defined by the sender ([COL 3 lines 33-41])

16.   As per claim 10, Boivie et al. teaches the method of claim 9, wherein at least a portion of

the multicast distribution tree along which the one or more packets travel is varied on a packet-

by-packet basis -modified list of destinations ([COL 4 lines 26-29], [COL 5 lines 8-12])

17.   As per claim 17, Boivie et al. teaches a system for distributing content to a computer

network comprising:

        a server –16 ([FIG 2], [COL 7 lines 57-60] adapted for sending at least one data packet,

where said at least one data packet contains at least a portion of a multicast distribution tree;

        wherein both the server and first group of receivers each comprise a packet forwarding

mechanism – ([COL 4 lines 41-45] e.g., receivers R3-R5 provide for forwarding packets. It is

further implied that the server is adaptable to forward packets based because nodes may be

adapted to function in accordance with the invention [COL 7 lines 51-55])

18.   As per claim 18, Boivie et al. teaches the method of claim 17, wherein the server -16 is

adapted to define a distribution tree – source node A ([COL 3 lines 33-40]) for distributing the at

least one data packet to the least a first group of receivers – R1,R2,R3 ([COL 4 lines36-40] e.g.,

it is interpreted that packets are received, copied, and sent to respective receivers).

19.   As per claim 19, Boivie et al. teaches the method of claim 17, wherein the distribution tree

defines receivers –R1-R9 ([FIG 1]) to which the at least one data packet is directed and the paths

– address of R1 ([COL 4 line 9]) along which the at least one data packet travels to the receivers.

20.   As per claim 20, Boivie et al. teaches the method of claim 17, wherein the system is

adapted to distribute content on a packet-by-packet basis - modified list of destinations ([COL 4

lines 26-29], [COL 5 lines 8-12])

Conclusion

21.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

6353596 – Multi-casting for reduced latency and bandwidth

6728777 – Packets are selectively replicated at certain routers/nodes

20020176419 – Receiver group E1-E3 with packet copying via nodes

20050015431 – Replicating packets via node groups to sub-node groups

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darrin Dunn whose telephone number is (571) 270-1645. The examiner can normally be reached on EST:M-R(8:00-5:00) 9/5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DD
07/18/2007

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Art Unit 2121